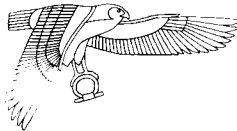


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REPRESENTATIONS OF GRANARIES IN OLD KINGDOM TOMBS

Rodna Siebels
Macquarie University

Egyptian wall paintings afford a wonderful opportunity to gain an understanding of the basics of the day to day living practices of these ancient people. Given the emphasis placed on representations of the agricultural cycle in tomb decoration, the importance of the main cereal crops, barley and emmer wheat, was clearly paramount. It is therefore of some interest that we are able to determine how the bounty derived from the harvest of these crops was stored and controlled. Fortunately, the Egyptian artist has provided many of the answers.

The granaries represented in Egyptian tomb scenes are, for the most part, very similar in appearance; they consist of a row of tall adjoining structures with domed roofs, standing on a raised platform. This platform raised the granaries well above ground level, an arrangement which Vandier suggests was probably designed to protect the contents from the damaging effects of the annual inundation (Fig. 1).¹ Granaries were constructed of mud brick, a detail sometimes suggested in wall scenes by representing them as grey-black structures, often similar in colour to that used to indicate the ground on which they stand.

The artists regularly included a rectangular shape towards the base of each granary, representing the trap-door through which its contents could be accessed. A second opening at the top of each structure was also an essential feature of the design, for it was through this that the sacks of grain were poured when the season's harvest was delivered to the granaries for storage. While this opening is not usually visible in tomb representations, the projecting piece adorning the domed roof of granaries in some scenes may signify the handle by which its covering lid might be removed. Alternatively, the presence of the roof opening may be indicated by the placement of fieldhands at the top of the granary, receiving sacks of grain from their fellow workers. In the tomb of Akhety-meru-nesut at Giza these fieldhands appear to be standing inside the granaries, perched on top of the grain which is already stored within (Fig. 2).

Scenes from late Old Kingdom tombs indicate that granaries were sometimes part of a much larger structure, which included an entry hall with a roof supported by columns, and a set of stairs allowing access to the opening at the top of each dome (Fig. 3). It is possible that these larger edifices were representative of state-owned storage facilities, rather than those that were

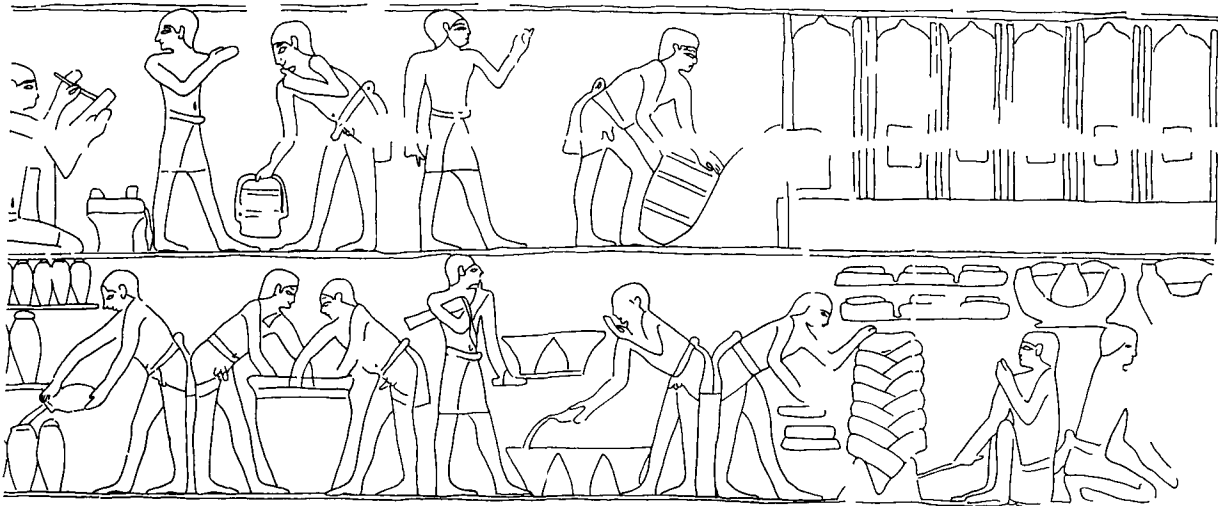


Figure 1.

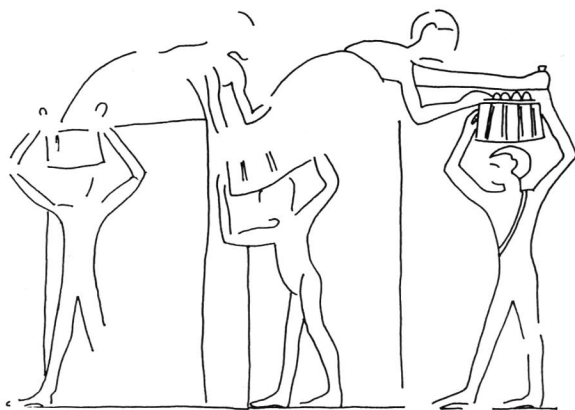


Figure 2.

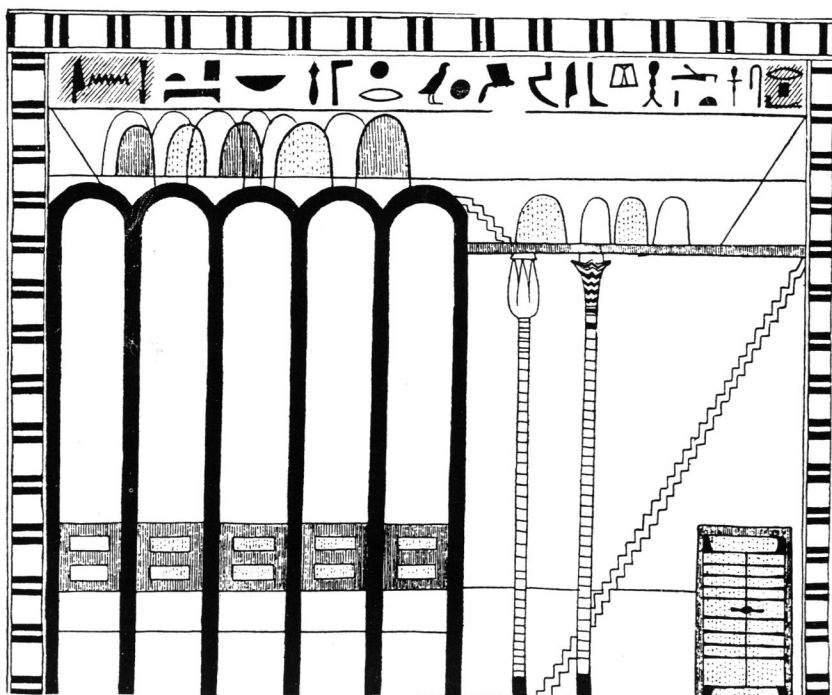







Figure 3.

privately owned. In the tomb of Mery-aa at el-Hagarsa, a scene illustrates an occasion when fieldhands were required to climb the stairs of one such granary complex, shouldering sacks of grain in order to deposit the contents inside for storage (Fig. 4). In his tomb, Mery-aa includes an autobiographical inscription in which he emphasises his services to the state in 'the winter years of famine', providing the king with barley and other varieties of grain.² It is perhaps the delivery of this supply to the state granary that is illustrated in the scene described above.

The scenes in which granaries are depicted usually indicate the variety of grain stored, either in an inscription placed along the top of the register, or as a label inscribed on the face of each structure. For example, in the tomb of Nikauisesi, we are told that the granaries store three different varieties of grain:  *ph* or pekha grain,  *jt mh* or Lower Egyptian barley and  *bs* or malted barley (Fig. 5). Sometimes the inscriptions reveal that the granaries held other produce besides that yielded from cereal crops, and as such these structures might be better described as storehouses. In the tomb of Kagemni at Saqqara the row of domed storage chambers attest to the variety of produce held in storage, as amongst the contents listed here are  *w^h* (carob beans) and  *dsbw* (figs) (Fig. 6).

Granaries were usually included in tomb decoration illustrating specific events that occurred during the course of the agricultural year, and activities related either to the removal of grain via the trapdoor at the base of the granary, or to the storage of grain deposited through the opening at its top. The storage and removal of grain was strictly policed and these activities were always undertaken with at least one scribe in attendance who kept careful account of all deposits and withdrawals.

The storage of grain

In many scenes, it is clear that the nature of the activity taking place is one of storage, with a line of individuals carrying baskets balanced on their heads as they make their way towards a row of granaries. In scenes dating to the very end of the Old Kingdom, these men are seen climbing stairs which take them to the top of granaries that are incorporated within tall structures often with elaborate pillars holding up the roof. Those of an earlier date merely pass their burdens to a colleague who stands at a higher level, either on the platform on which the granaries stand, or on top of the granary itself.

Granaries are often located in registers following those devoted to the agricultural cycle, the juxtaposition bearing witness to the culmination of a successful agricultural year with the storage of the harvested crop. Sometimes the row of granaries serves as the backdrop to another major event in the agricultural cycle, the annual rendering of accounts, when scribes

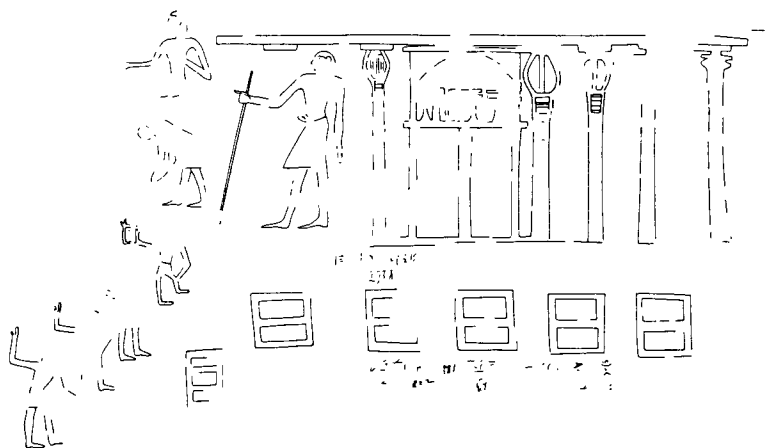


Figure 4.

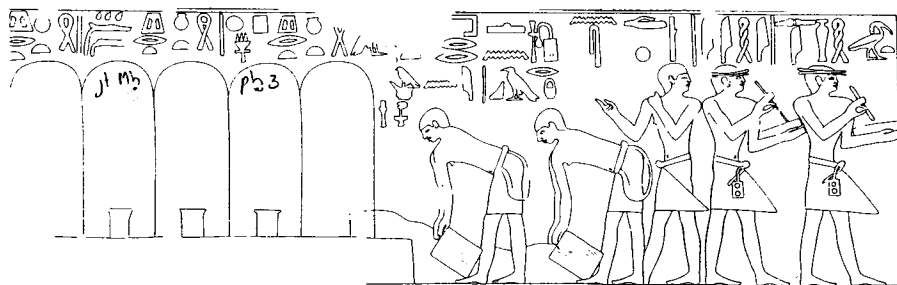


Figure 5.

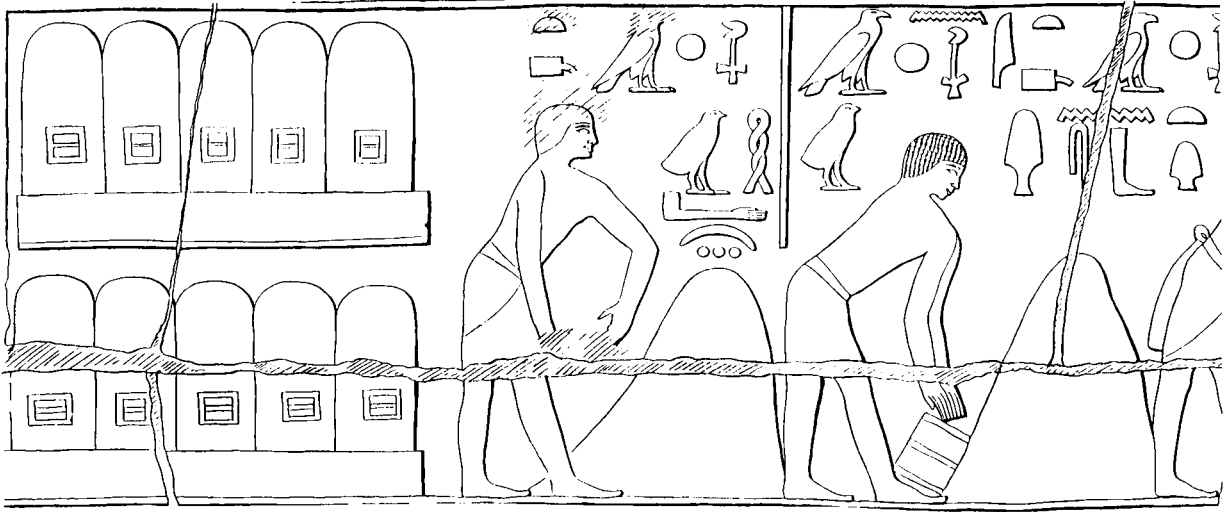


Figure 6.

assembled to carefully record the measures of grain collected from the various estates before it was placed into storage.

A scene from the Fifth Dynasty tomb of the brothers Nianchchnum and Khnumhotep illustrates well this aspect of agricultural life (Fig. 7). In the lowest register a group of women known as the $\overline{\text{djwt}}$ or 'five crew'³ complete the final processes of winnowing and sieving to remove the last of the impurities from the harvested grain. The next register follows on from this activity with the cleaned and separated grain left in two piles to await transferral to the granary. The caption makes clear that each pile represents a different type of crop, the one to the left identified as barley $\overline{\text{jt}}$, that to the right as emmer wheat $\overline{\text{bdt}}$. The transfer of this material to the granary is the subject of the next register. This work is undertaken by a pair of fieldhands who extract measures of grain from each pile, closely supervised by an official identified as a $\overline{\text{nh}t \text{ hrw}}$ ⁴ or crier. His task was to call out the number of measures taken by each fieldhand so that an accurate tally may be kept. He can be seen pointing with his index finger to indicate a count of one measure. Usually a scribe is included in scenes of this type, recording the number of measures called out by the $\overline{\text{nh}t \text{ hrw}}$.

In the third register, fieldhands carry filled sacks to a row of granaries, which they hand over to a colleague standing on the granary platform. The caption informs us that he is: $\overline{\text{šsp jt r šnw}t}$ 'receiving barley for the granary'.

The uppermost register illustrates the rendering of accounts, with the final record handed over to an official identified as an $\overline{\text{jmj-r pr}}$, or 'overseer of the house'. This occasion also provided an opportunity to mete out any appropriate punishment to those who had proven negligent in the payment of their tax assessment. These individuals are represented as supplicants forced by officials into varying attitudes of deference, often culminating in a final act of submission lying fully prostrate on the ground before the scribes. Captions identify these individuals as $\overline{\text{hk}w}$ or 'headmen' of local towns. It is likely that part of this punishment was a sound beating, as one of the accompanying officials is usually in possession of a stick, the top of which is sometimes represented as a human hand. The most extreme form of punishment is represented in several tombs dating to the reign of Teti, where the beating was administered after the criminal had been stripped naked and tied to a post (Fig. 8). Viewed in this light, our own taxation system doesn't seem quite so bad!

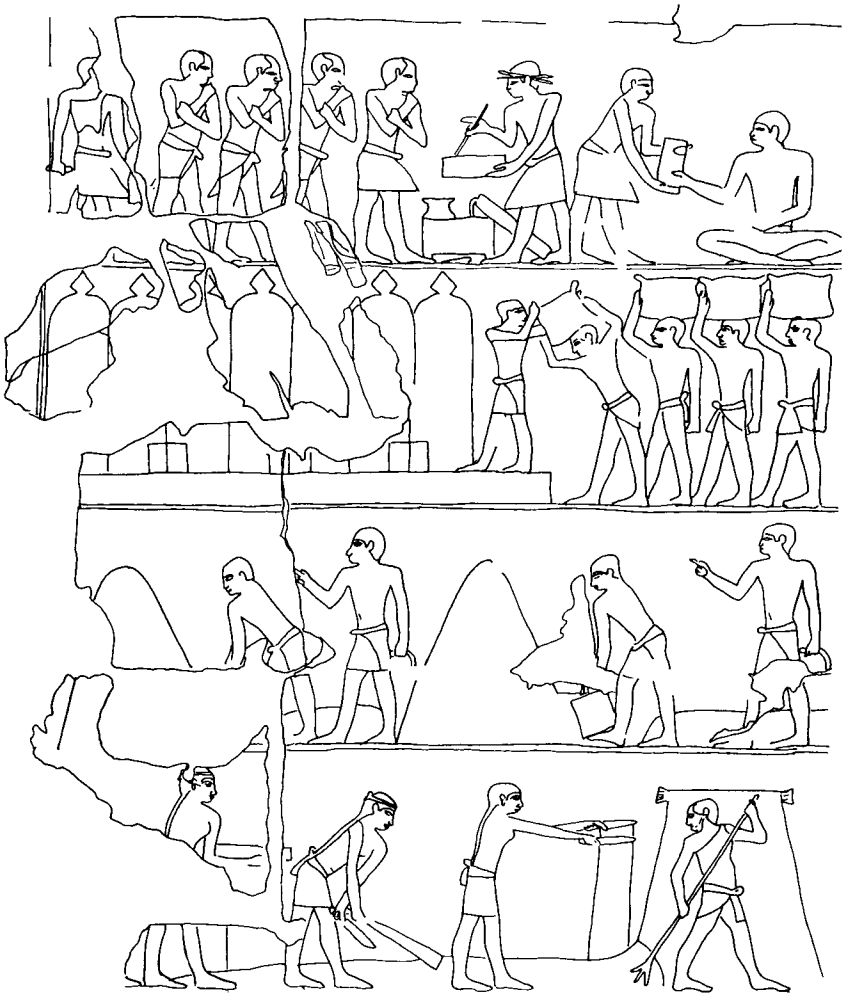


Figure 7.



Figure 8.

Removal of grain from granaries

Some Old Kingdom tomb scenes indicate the removal of grain from a granary at some point after it had been put into storage. Here, a flow of grain can be seen issuing from the rectangular opening towards the base of the granary, and it is to this pile that a fieldhand applies his bucket to remove some of its contents. The grain spills out of only the first granary in the row, usually cascading from the trapdoor and over the platform on which it stands.

This activity was also strictly monitored, with a scribe recording on a sheet of papyrus the exact number of measures removed from the granary. Often this scribe is identified as a *zš šnw*, 'scribe of the granary', and he is assisted in his endeavours either by a *nht-hrw*, or by another official called *rht* 'He who keeps the numbers', who performed a similar service.

While most of the inscriptions above these scenes do not betray the purpose behind this extraction of grain from the granaries, in several tombs the subsequent registers suggest its likely destination and use. These registers illustrate the various processes in the baking of bread and brewing of beer, both of which required large quantities of grain as the primary ingredient. An example of this may be found in the Saqqara tomb of Khentika where the extracted grain is destined for the bakers and brewers in the register immediately below the granaries (see Fig. 1).

An inscription above a grain removal scene in the tomb of Ptah-hetep reveals a purpose for this extraction unattested elsewhere in Old Kingdom tomb decoration (Fig. 9). The surviving block consists of three registers, the two uppermost devoted to female weavers being presented with a variety of

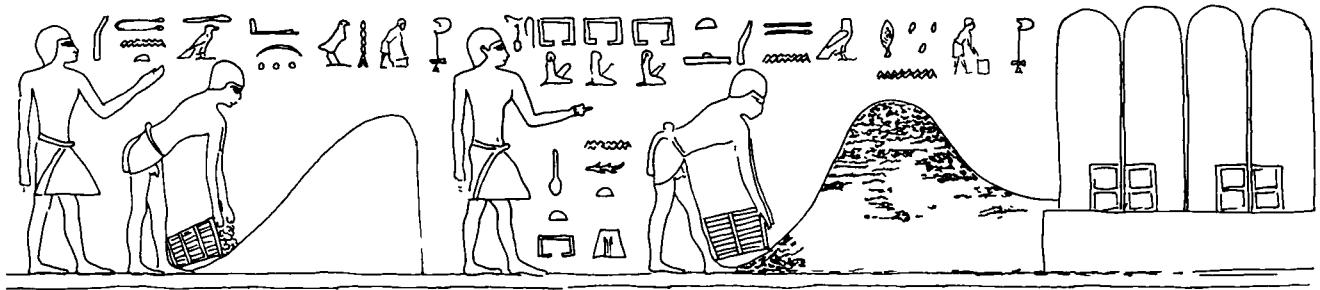


Figure 9.

items as a reward for their endeavours. It is made clear that measures of grain, as well as other produce, were included in this list:


 ḥꜣj jt bdt n mꜣnt zꜣw prw sꜣmwt

'measuring barley and emmer wheat for rewarding the leading women of the houses'.

Portable Granaries

Several scenes suggest that portable granaries were also used, particularly at the beginning of the agricultural cycle when seed needed to be transported to the field to be sown as the next season's crop. One such example of a portable granary may be indicated in the tomb of Nefer-baw-Ptah where we find scribes supervising the extraction of grain from a low, tapering structure (Fig. 10). If the identification of this structure as a portable granary is correct, then its flat roof must represent an opening covered by stone or timber, as a roof of this type would have been virtually impossible to produce in mud brick. One might expect a small granary such as this to have been dragged onto the field by means of a sled, although no such contrivance is evident in this scene.

Granary or stack?

Agriculture was a favourite theme in Egyptian tomb decoration, with detailed representations of the essential stages in the annual cycle of the most important cereal crops; barley and emmer wheat. Several structures included in the depiction of this cycle have been identified as granaries, although a closer examination of these scenes would suggest that this is unlikely.

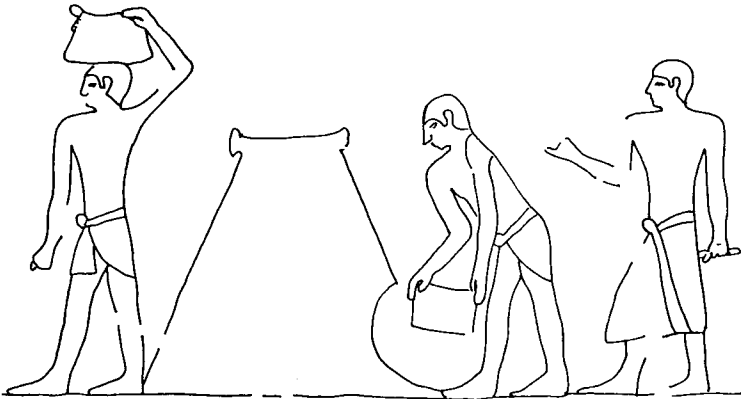


Figure 10.

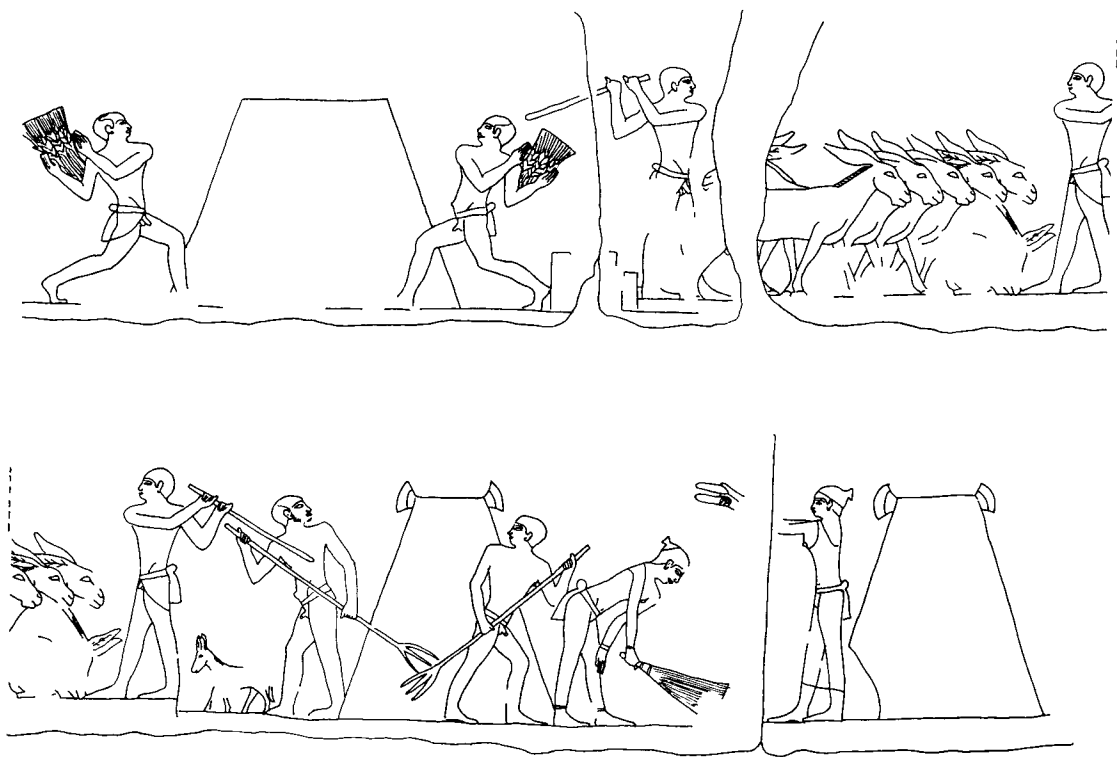


Figure 11.

Once the sheaves of barley and emmer wheat had been harvested, they were transported by donkey to the threshing floor where they were unloaded and tossed onto a temporary stack, the shape of which resembles a truncated cone. There is no ambiguity in the identification of this edifice as a stack, as the scenes regularly include a pair of fieldhands actively engaged in the task of tossing sheaves onto its summit. Additionally, the detailed rendering of the stack's surface often leaves no doubt that it is comprised of loose bundles of sheaves. The sheaves remained in these stacks until such time as they were required for further processing, at which time the stacks were dismantled and the sheaves spread out on a threshing floor. Teams of cattle and donkeys were then driven around this threshing floor in a circuitous path to break up the sheaves by the trampling action of their hooves. This sequence is well illustrated in the tomb of Sekhem-ankh-Ptah at Saqqara where, to the left of the threshing floor, a temporary stack is undergoing construction at the hands of two fieldhands who toss sheaves onto its summit, while to the right, two similarly shaped structures can also be seen (Fig. 11). Representations of the agricultural cycle regularly include these additional tall edifices on the other side of the threshing floor and while it is understood that they are not the same as the temporary stacks, it is these that are often incorrectly identified as granaries of mud brick.⁵ It is more likely that these too are stacks, but comprised of different material than those consisting of loose bundles of sheaves.

In nearly every instance, these structures are decorated at each upper corner with ornamentation described variously as stalks of papyrus,⁶ flowers,⁷ umbels,⁸ lotus buds⁹ and arusa ears,¹⁰ a feature not found on the temporary stacks of sheaves waiting the threshing process. In addition to this ornamentation on its upper corners, some stacks exhibit a concave indentation at the base, a feature which has led to the suggestion that these are granaries of Nile mud, and the indentation thus representing the rectangular trapdoor through which the grain could be extracted. A close examination of the location of these structures, and the activity taking place before them, suggests another possibility.

Most scenes locate the indented structure next to the threshing floor and always placed in close conjunction with the work of the 'five crew', indicating that it is from this point that the material is being removed for further processing. Usually there are one or several men with pitchforks working at its face, often with a pitchfork directed towards the indentation. It is likely, then, that these structures represent stacks of material removed from the threshing floor, and the so-called 'arusa ears', possibly fashioned of papyrus leaves,¹¹ were attached by the fieldhands to celebrate the completion of this task.¹² The addition of this ornamentation suggests that the stacks were left standing for a time before the final processing was undertaken. When the time came for this to be done, only one stack was worked at a time. The

indentation near the base is the result of the inroads made into the stack by a man wielding a pitchfork as he directs the contents towards the women of the 'five crew'. This indentation is always oriented towards these women, and frequently a stream of material is represented issuing from it and merging with the pile of grain at their feet.

While the original colour of these stacks is not always preserved in wall scenes, several tombs indicate that they were once a golden yellow, the same colour as the piles at the feet of the 'five crew'. A note of discord can be found, however, in the Giza tomb of Ka-em-ankh where a similar shaped structure is clearly rendered in the same grey/black paint used to represent the soil on which it stands.¹³ This scene is not associated with the final stages in the harvest cycle, but with the activity of ploughing, and may therefore be representative of a portable granary used to bring seed to the field prior to sowing. The inclusion of a man removing a measure of grain from this structure with a bucket gives some support to this hypothesis. The very shape of the indented structures with arusa ears would tend to negate any possibility that they are constructed of Nile mud as all are somewhat taller than the height of a man, and have sides tapering to the top. In ancient Egypt, structures of this type constructed of mud brick always have a domed roof, a flat roof being virtually impossible to achieve in this medium without the introduction of some other material, such as wood or stone, neither of which are indicated in these scenes. When one considers both the appearance of these structures, and the context in which they occur, there can be no doubt that they are stacks comprised of material removed from the threshing floor, not solid granaries.

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- ¹ J. Vandier, *Manuel d'archéologie égyptienne*, vol. VI. *Bas-reliefs et peintures. Scènes de la vie agricole à l'Ancien et au Moyen Empire* (Paris, 1978), p. 199.
 - ² N. Kanawati, *The Rock Tombs of El-Hagarsa*, vol. 3 (Sydney, 1995), p. 33.
 - ³ The women are usually referred to as the 'Five Crew' or 'fivers' on the basis of the five strokes that are usually included with the phonetic elements of the word. It has been suggested that these women worked in groups of five, for which see, H. G. Fischer, "Women in the Old Kingdom and the Heracleopolitan Period" in B. Lesko (ed.) *Women's Earliest Records for Ancient Egypt and Western Asia* (Atlanta, 1989), p. 11. While this remains a possibility, there is very little to support this theory from the numbers of women represented in Old Kingdom tombs in this context. More usually they are depicted in groups of three or four.
 - ⁴ By combining *nḥt*, used here as a participle meaning 'one who is strong', with the noun *ḥrw* 'voice', the title may be translated as '[he who is] strong of voice', an attribute that might be considered essential in the effective transmission of the precise number of measures being extracted from the pile.
 - ⁵ H. Junker, *Gîza*, vol. IV (Vienna/Leipzig, 1940), p. 82, Junker, *Gîza*, vol. VI (Vienna/Leipzig, 1943), p. 150; Junker, *Gîza*, vol. XI (Vienna, 1953), pp. 195-96; L. Klebs, *Die Reliefs des Alten Reiches* (Heidelberg, 1915), p. 51.
 - ⁶ P. Montet, *Les scènes de la vie privée dans les tombeaux Égyptiens de l'Ancien Empire* (Paris, 1925), pp. 226-27.

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- ⁷ N. Kanawati - A. Hassan, *The Teti Cemetery at Saqqara*, vol. 2: *The Tomb of Ankhmahor* (Warminster, 1997), p. 30.
- ⁸ Y. Harpur, *Decoration in Egyptian Tombs of the Old Kingdom: Studies in Orientation and Scene Content* (London, 1987), p. 213.
- ⁹ K. R. Weeks, *Mastabas of Cemetery G6000, Including G6010 (Neferbaupth), G6020 (Iymery), G6030 (Ity), G6040 (Shepseskhafankh)*. Giza Mastabas, vol. 5 (Boston, Mass., 1994), p. 46.
- ¹⁰ W. K. Simpson, *The Offering Chapel of Sekhem-ankh-Ptah in the Museum of Fine Arts, Boston* (Boston, Mass., 1976), p. 15.
- ¹¹ In the tomb of Kahayef, the arusa ears are painted bright green, suggesting that they are comprised of papyrus leaves. See Junker, *Gîza* VI, pl. 9.
- ¹² This reason is also proposed by J. Vandier, *Manuel*, vol. VI, p. 191 and C. Ziegler, *Le Mastaba de Akhetetep. Une Chapelle funéraire de l'Ancien Empire* (Paris, 1993), p. 74, n.301.
- ¹³ H. Junker, *Gîza*, vol. IV, pl. 12.